

Amendments to the Claims

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (Currently Amended) A reference standard for calibration of an analysis instrument, said reference standard comprising

a solid body formed of a number of solid compounds and a solid substrate,

the substrate having scattering properties similar to a product to be analyzed with said analysis instrument and being spectrally neutral in a wavelength range to be used in the analysis instrument,

wherein the substrate and the compounds in combination imitate, with respect to intensity, wavelength and scattering properties, ~~imitate~~ the spectral response of the product to be analyzed with said analysis instrument.

2. (Original) The reference standard according to claim 1, wherein a compound imitates the spectral response of a physical property of the product to be analyzed, which physical property is one in the group of moisture, protein content, fat content, oil content, optical density, fiber content, starch content, sugar content and wavelength markers.

Claims 3 and 4 (Cancelled).

5. (Original) The reference standard according to claim 1, wherein said substrate is polytetrafluoroethylene (PTFE).

Claim 6 (Cancelled).

7. (Original) The reference standard according to claim 1, wherein said substrate is spectrally neutral in the visible and near infrared region.

8. (Original) The reference standard according to claim 1, wherein the product to be analyzed is one in the group of feed, forage, grain, flour, meal, protein extracts, derived agricultural products, sugar, sweeteners, meat and dairy products.

9. (Original) The reference standard according to claim 1, wherein the product to be analyzed is a pharmaceutical.

10. (Currently Amended) A method for calibration of an analysis instrument, said method comprising recording, by means of said analysis instrument, the spectral response of a reference standard ~~comprising a solid body~~ according to claim 1, which with respect to intensity, wavelength and scattering properties imitates the spectral

response of a product to be analyzed with said analysis instrument,

evaluating the differences between the spectral response from said analysis instrument and an expected spectral response,

calibrating said analysis instrument according to the result of the evaluation.

11. (Original) The method according to claim 10, wherein the expected spectral response is obtained by recording, by means of a reference instrument, the spectral response of said reference standard.

12. (Original) Method according to claim 11, wherein the reference instrument is a master instrument.

13. (Original) Method according to claim 11, wherein the analysis and reference instruments are spectrometers.

14. (Original) The method according to claim 10, wherein recording comprises irradiating said reference standard with electromagnetic radiation and spectrally detecting the electromagnetic radiation which has been transmitted through or reflected from said reference standard.

15. (Original) The method according to claim 10, wherein the method further comprises transforming the spectral response from the analysis instrument and the expected spectral response into factor space based on the properties of the product to be analyzed on the analysis instrument.

16. (Original) The method according to claim 10, wherein the evaluating comprises directly comparing the spectral response from said analysis instrument with the expected spectral response.

17. (Original) The method according to claim 10, wherein the evaluating comprises mathematical prediction of a set of parameters from an equation predicting composition.

Claim 18 (Cancelled).

19. (Original) Method according to claim 10, wherein recording comprises irradiating the reference standard with electromagnetic radiation and scanning said radiation over wavelengths within the range of visible and near infrared light.

20. (Original) Method according to claim 10, wherein recording the spectral response of a reference standard comprises recording the spectral response of a reference standard that comprises a solid body formed of a

number of compounds and a substrate having scattering properties similar to a product to be analyzed with said analysis instrument and being spectrally neutral in a wavelength range to be used in said analysis instrument, wherein the substrate and the compounds in combination with respect to intensity, wavelength and scattering properties imitate the spectral response of a product to be analyzed with said analysis instrument.

21. (New) A reference standard for calibration of an analysis instrument, said reference standard comprising

a solid body formed of a number of compounds and a substrate having scattering properties similar to a product to be analyzed with said analysis instrument and being spectrally neutral in a wavelength range to be used in the analysis instrument,

wherein the substrate and the compounds in combination, with respect to intensity, wavelength and scattering properties, imitate the spectral response of the product to be analyzed with said analysis instrument, and

wherein at least one of the compounds is inorganic, or said substrate is a fluorinated substrate, or the compounds in the solid body are homogeneously distributed within the solid body.

22. (New) A method for calibration of an analysis instrument, said method comprising

recording, by means of said analysis instrument, the spectral response of a reference standard comprising a solid body, which with respect to intensity, wavelength and scattering properties imitates the spectral response of a product to be analyzed with said analysis instrument,

evaluating the differences between the spectral response from said analysis instrument and an expected spectral response,

calibrating said analysis instrument according to the result of the evaluation,

wherein the evaluating comprises comparing the spectral response from said analysis instrument with the expected spectral response in factor space.

23. (New) Method according to claim 22, wherein recording comprises irradiating the reference standard with electromagnetic radiation and scanning said radiation over wavelengths within the range of visible and near infrared light.